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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
BERNSHTEYN, MICHAEL				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
06/16/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/505,370

Applicant(s)

SCHERER ET AL.

Examiner

MICHAEL M. BERNSTEYN

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14, 15, 26, 27 and 31-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14, 15, 26, 27 and 31-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. After further consideration the Notice of Allowance has been withdrawn.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 14, 15, 26, 27, and 31-43 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Muller et al. (U. S. Patent 5,098,550) as evidenced by Hackh's Chemical Dictionary.

With regard to the limitations of claims 14, 15, 26, 27, and 31-43, Muller et al. discloses a method of solvent dewaxing of petroleum oil distillates containing wax. See column 2, lines 19-21. Note, petroleum oil distillates are, by definition, mineral oil distillates since "mineral oil" is defined as "an oil obtained from inorganic matter, as petroleum". See Hackh's Chemical Dictionary for such a definition. Furthermore, the waxes that need to be removed are recognized by Mueller et al as being paraffins. See column 1, lines 11-20. Thus, the method of Mueller et al is a method for solvent deparaffinization of paraffinic mineral oil distillates, as recited.

The method of Mueller et al comprises adding a dewaxing additive and a solvent to the petroleum oil distillates containing wax to obtain a mixture. See column 2, lines 19-25. Mueller et al also discloses that the mixture is then stirred until a clear solution results. See column 6, lines 47-50. The solution of Mueller et al is then cooled at a given rate to precipitate out the wax. See column 2, lines 25-26, column 4, lines 26-36, and column 6, lines 50-53. Mueller et al even disclose that the temperature to which the solution is cooled can be as low as -50°C. See column 4, lines 26-36.

Next, the precipitated wax is separated from the solution by filtration to obtain dewaxed mineral oil distillates. See column 2, line 26, and column 6, line 50, to column 7, line 4. As the dewaxing additive, Mueller et al discloses the use of a polymer P2. Polymer P2 can be polyalkyl methacrylates wherein the alkyl group contains 1-40 carbons. Mueller et al even disclose that polymer P2 can be made from a combination of alkyl methacrylates having 12-18 carbons and alkyl methacrylates having 1-9 carbons. See column 3, lines 25-39.

In a particular example for P2, Example 7 demonstrates the production of P2-6 which is a poly C₁-C₁₈ alkyl methacrylate. P2-6 is made up from C₁₂-C₁₈ alkyl methacrylate and methyl methacrylate. See Example 7 bridging columns 5-6. The C₁₂-C₁₈ alkyl methacrylate of P2-6 corresponds with Formula B as recited in claim 14 where R⁷ is CH₃ and R⁸ is linear or branched alky of C₁₂-C₁₈ and the methyl methacrylate of P2-6 corresponds with Formula A as recited in claim 14 where R¹ is CH₃, R² is COOR³, and R³ is C₁. In addition, the additive P2-5 as shown in Example 6, column 5, also appears to meet the limitations of the additive of claim 14. The methacrylic ester of isodecyl alcohol corresponds with Formula A of claim 14 where R¹ is CH₃, R² is COOR³, and R³ is C₁₀, and the methacrylic ester of tallow fatty alcohol (average C value of 17) corresponds with Formula B as recited in claim 14 where R⁷ is CH₃ and R⁸ is linear or branched alky of C₁₇. These two additives, P2-5 and P2-6, were used in Examples 8-10 at columns 6-8.

While none of the explicitly disclosed examples include using these particular additives with cooling below -20°C, given the disclosure of all the limitations noted

above, one of ordinary skill in the art would have immediately envisaged using this combination in dewaxing petroleum oil distillates. In the alternative, given the disclosure of suitable temperatures at column 4, lines 26-36, it would have been obvious to modify the examples that use P2-5 or P2-6 as additives such that the cooling is carried out to a temperature below -20°C as per the suggestion to do exactly that at column 4, lines 26-36.

It is noted that while Mueller et al fails to disclose that the precipitate is in the form of wax "crystals which form a filter cake which is porous and permeable to the solution", since all the other limitations of the method have been met by the method of Mueller et al, such a limitation would seem to be inherent in the method of Mueller et al. due to the following.

Although Mueller reference is silent with respect to the formation of a filter cake during the filtration process, and it does not explicitly disclose that a filter cake is necessarily formed, it is noted that the reference teaches that in their method wax precipitates and that the precipitate is separated off by filtration (Examples 8-10). The wax filtered off accumulates to a degree that is sufficient to collect and analyze for oil content (col.7). This accumulated wax collected by the filtration process in reality constitutes a filter cake.

Therefore, it is Examiner's position that it does not require that a filter cake is formed only that the crystals formed have the capability of forming a filter cake that is porous and permeable to solution. The crystals are then separated from solution by filtration. Applicant's specification discloses that dewaxing aids influence the size and

shape of the paraffin crystals so that compact structures are formed which form a filter cake which is porous and permeable to the solvent-oil mixture (page 17, lines 28-31).

In light of this teaching, it seems reasonable to presume that the crystals of the reference are capable of forming a filter cake which is porous and permeable to the solution because the reference applies the same dewaxing agent and temperature conditions to the same starting material as the invention does and produces solutions that are filterable.

Regarding the limitations of claim 1 "increasing a filtration volume per filtration time compared to the filtration volume per filtration time using no dewaxing additive", it is noted that the filtration that occurs in the method of Mueller et al produces a certain "filtration volume per filtration time". Since one can run filtrations at various rates, i.e., filtrations can be speed up or slowed down; slowing down a filtration process is quite easy, the claim does not define the rate further relative to using no dewaxing additive, and, therefore, one could choose a filtration process using no dewaxing additive such that the filtration volume per filtration time is less than that produced in Mueller et al.

Therefore, it is the Examiner's position that the filtration volume per filtration time in Mueller et al is greater than some filtrations using no dewaxing additive, which meets the claim limitation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL M. BERNSHTEYN whose telephone number is (571)272-2411. The examiner can normally be reached on M-Th 8-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael M. Bernshteyn/
Examiner, Art Unit 1796

/M. M. B./
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/David Wu/
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